

AMENDMENTS TO THE CLAIMS:

Replacement Claim Set:

1. (Currently amended) A method of coating an implantable medical device comprising the steps of:

providing a medical device capable of being implanted; followed by:

heating the medical device to a temperature greater than ambient temperature;

providing a coating substance wherein the coating substance comprises a solvent, a polymer dissolved in the solvent, and optionally, an active agent;

atomizing the coating substance with a gaseous propellant; and

~~spraying a coating directing the coating substance, wherein the coating substance includes a polymer and a fluid and optionally an active agent, onto the medical device after the heating step; and,~~

wherein the coating substance is applied to the warm implantable device.

2. (Previously Presented) The method of Claim 1 wherein the implantable medical device is a stent.
3. (Canceled).
4. (Canceled).
5. (Currently amended) A method of coating an implantable medical device comprising the acts of:

~~spraying a composition including a fluid, a polymer, and an active agent onto a medical device;~~

providing a coating substance wherein the coating substance comprises a solvent, a polymer dissolved in the solvent, and optionally an active agent;

atomizing the coating substance with a gaseous propellant;

directing the atomized coating substance onto the medical device;

directing a gas with a temperature greater than ambient temperature onto the medical device subsequent to spraying the composition to induce evaporation of at least a portion of the fluid from the composition; and

repeating the acts of providing, atomizing, directing the coating substance, and directing a gas ~~spraying and directing~~ to form multiple layers of the composition on the medical device.

6. (Canceled).
7. (Canceled).
8. (Canceled).
9. (Previously Presented) The method of Claim 37 wherein the act of spraying is performed at a flow rate of about 0.01 mg/sec to about 1 mg/sec.
10. (Previously Presented) The method of Claim 5 wherein the act of spraying is performed for a duration of about 0.5 seconds to about 5 seconds.
11. (Currently Amended) The method of Claim 5[[,]] wherein the temperature of the gas is about 25°C to about 200°C.

12. (Currently Amended) The method of Claim 5[[,]] wherein the act of directing is performed for a duration of about 1 second to about 100 seconds.
13. (Currently Amended) The method of Claim 5[[,]] wherein the act of directing is performed at a flow rate of about $0.01 \text{ m}^3/\text{second}$ to about $1.42 \text{ m}^3/\text{second}$.
14. (Canceled).
15. (Currently Amended) The method of Claim 5[[,]] wherein the active agent is actinomycin D, paclitaxel, docetaxel, or rapamycin.
16. (Currently Amended) The method of Claim 5[[,]] wherein the composition additionally includes a radio-opaque element or a radioactive isotope.
17. (Previously Presented) The method of Claim 5 additionally comprising rotating the implantable medical device about the longitudinal axis of the implantable medical device.
18. (Previously Presented) The method of Claim 5 additionally comprising moving the implantable medical device in a linear direction along the longitudinal axis of the implantable medical device.
19. (Canceled).
20. (Currently amended) The method of Claim 5 wherein the implantable medical device is a stent and the stent is at least partially expanded during the acts of ~~ap-
plying and directing~~ providing, atomizing, directing the coating substance, and di-
recting a gas.

21. (Currently amended) The method of Claim 5 additionally comprising heating the implantable medical device prior to the act of ~~spraying~~ providing the composition, wherein the implantable medical device is heated to a temperature greater than ambient temperature and the composition is applied to the warm implantable medical device.
22. (Previously Presented) A method of coating an implantable medical device comprising the acts of:
- ~~spraying a composition including a fluid, a polymer, and optionally an active agent onto a medical device;~~
- providing a coating substance wherein the coating substance comprises a solvent, a polymer dissolved in the solvent, and optionally an active agent;
- atomizing the coating substance with a gaseous propellant;
- directing the atomized coating substance onto the medical device;
- applying a gas with a temperature greater than ambient temperature onto the implantable medical device for a duration of about 1 second to about 100 seconds to remove at least a portion of the solvent from the ~~composition~~ coating substance; and
- repeating the acts of providing, atomizing, directing the coating substance, and directing a gas ~~spraying and applying~~ to form multiple layers of the composition.
23. (Canceled).
24. (Previously Presented) The method of Claim 1 wherein the temperature greater than ambient is about 35°C to about 80°C.

25. (Currently Amended) The method of Claim 1[[,]] wherein the coating substance comprises an ethylene vinyl alcohol copolymer or poly-n-butyl methacrylate.
26. (Previously Presented) The method of Claim 5 wherein the act of repeating is performed 2 to 39 times.
27. (Previously Presented) The method of Claim 5 additionally including waiting for a period of about 0.1 seconds to about 5 seconds after application of the composition before directing the gas onto the implantable medical device.
28. (Currently Amended) The method of Claim 5[[,]] wherein the composition comprises a polymer selected from the group consisting of an ethylene vinyl alcohol copolymer and poly-n-butyl methacrylate.
29. (Currently amended) The method of Claim 5 wherein, during directing the coating substances~~spraying~~, about 1 microgram of composition per cm² of implantable medical device surface to about 50 micrograms of composition per cm² of implantable medical device surface is applied.
30. (Currently amended) The method of Claim 5 wherein the solvent fluid~~fluid~~ is selected from the group consisting of dimethylsulfoxide, dimethylformamide, and dimethylacetamide and combinations thereof.
31. (Previously Presented) The method of Claim 21 wherein the temperature greater than ambient is 35°C to 80°C.
32. (Currently Amended) The method of Claim 22[[,]] wherein the polymer comprises an ethylene vinyl alcohol copolymer or poly-n-butyl methacrylate.
33. (Currently amended) The method of Claim 22 additionally including waiting for

a period of about 0.1 seconds to about 5 seconds after directing the coating substance ~~spraying~~ of the composition before applying the gas onto the implantable medical device.

34. (Currently Amended) The method of Claim 22[[,]] wherein the solvent is selected from the group consisting of cyclohexanone, ethyl acetate, chloroform and methanol.

35. (Withdrawn) A method of coating a stent, comprising the steps of:

adjusting the temperature of the stent to an application temperature below ambient temperature;

applying a coating substance, wherein the coating substance includes a polymer and a fluid and optionally an active agent, onto the stent after the adjusting step; and

maintaining the application temperature during the applying step.

36. (Previously presented) The method of Claim 2 wherein the stent is metallic.

37. (Previously Presented) The method of Claim 5 wherein the implantable medical device is a stent.

38. (Previously presented) The method of Claim 37 wherein the stent is metallic.

39. (Previously Presented) The method of Claim 22 wherein the implantable medical device is a stent.

40. (Previously presented) The method of Claim 39 wherein the stent is metallic.

41. (Currently amended) A method of coating an implantable medical device comprising the steps of:

providing a medical device capable of being implanted; followed by:

heating the medical device to a temperature greater than ambient temperature;

providing a coating substance wherein the coating substance comprises a solvent, a polymer dissolved in the solvent, and optionally, an active agent;

atomizing the coating substance with a gaseous propellant; and

directing the atomized coating substance onto the medical device after the heating step;

~~applying a coating substance onto the medical device after the increasing step wherein the coating substance includes a polymer dissolved in a fluid and optionally an active agent and wherein applying comprises spraying the composition onto the medical device; and~~

wherein the coating substance is applied to the warm implantable device.

42. (Currently amended) A method of coating a stent comprising the steps of:

providing a medical device capable of being implanted; followed by:

heating the medical device to a temperature greater than ambient temperature;

providing a coating substance wherein the coating substance comprises a solvent, a polymer dissolved in the solvent, and optionally, an active agent;

atomizing the coating substance with a gaseous propellant; and

spraying the coating substance onto the medical device after the heating step;

~~applying a coating substance onto the stent after the increasing step wherein the coating substance includes a polymer dissolved in a fluid and optionally an active agent and wherein applying comprises spraying the composition onto the stent; and~~

wherein the coating substance is applied to the warm implantable device.

43. (Currently amended) A method of coating an implantable medical device comprising the steps of:

heating the medical device to a temperature greater than ambient temperature;

~~spraying a coating substance including a fluid onto the warm medical device after the increasing step;~~

providing a coating substance wherein the coating substance comprises a solvent, a polymer dissolved in the solvent, and an active agent;

atomizing the coating substance with a gaseous propellant;

directing the coating substance onto the medical device;

directing a gas with a temperature greater than ambient temperature onto the medical device subsequent to ~~the application of the composition~~ directing the coating substance to induce evaporation of at least a portion of the solvent from the coating substance ~~fluid from the composition~~; and

repeating the acts of providing, atomizing, directing the coating substance, and directing a gas ~~spraying and directing~~ to form multiple layers of the

composition on the medical device.

44. (Currently amended) A method of coating an implantable medical device comprising the steps of:

providing a medical device capable of being implanted; followed by:

heating the medical device to a temperature greater than ambient temperature;

providing a coating substance wherein the coating substance comprises a solvent, a polymer dissolved in the solvent, and optionally, an active agent;

atomizing the coating substance with a gaseous propellant; and

directing the atomized coating substance onto the medical device after the heating step;

applying a gas with a temperature greater than ambient temperature onto the medical device for a duration of about 1 second to about 100 seconds to remove at least a portion of the solvent from the composition; and

repeating the acts of providing, atomizing, directing the coating substance, and directing a gas ~~spraying and applying~~ to form multiple layers of the composition.